


Recreation Modeling for the Oroville Relicensing Project

- Presentation to the Oroville Relicensing
Recreation and Socioeconomics Work Group,
February 27, 2003


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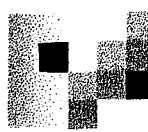
■ What's a model?

- ☐ A standard or example for imitation
- ☐ A representation of the “real” world
- ☐ A mathematical equation that expresses a relationship between two or more variables (such as lake levels and recreation attendance)



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- Some features of models to keep in mind
 - Predict outcomes for variables of interest (lake levels predict recreation attendance)
 - Need to pass the “common sense” test
 - Are highly dependent on quality of data being used (the GIGO principle)
 - Are not perfect!!




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- For the Oroville recreation studies, mathematical models will be used for study R3: Projected Operations Impacts on Recreation, and R12: Projected Recreation Use
- In addition, results from the models will be used as inputs for study R18: Economic Impacts and for study R19: Fiscal Impacts



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- Steps in model development and use
 - Model review, looked at other models (done)
 - Review of existing data (in progress)
 - Model specification and definition of variables
 - Model estimation and testing (find the “best fit”)
 - Use model to describe existing recreation attendance and to predict future attendance during the next license period
 - Use model results as an input for the economics and fiscal model for studies R18 and R19



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- Variables that will probably be used:
 - ☐ Recreation attendance records (mandatory)
 - ☐ Monthly mean pool elevation for Lake Oroville, or some variation (mandatory)
 - ☐ Population of northern California
 - ☐ Local or regional unemployment
 - ☐ Ambient temperature
 - ☐ Conditions at substitute sites



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- Some of the modeling studies reviewed:
 - An Economic Assessment of Alternative Water-level Management for Shasta and Trinity Lakes (USDA Southeastern Forest Experiment Station)
 - Economic and Fiscal Impacts of Predicted Changes in Recreation Activity (report prepared for Monterey County Water Resources Agency)
 - Central Valley Project Improvement Act EIS



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- Expected modeling approach
 - Summer season model, using available monthly attendance data
 - Annual model, using Fiscal Year attendance data
 - Adjustments and refinements of model results
 - Systematic undercounting of use??
 - Estimates of use by activity
 - Estimates of use by location